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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,595	11/14/2005	Teck Soh	003D.0052.U1(US)	1309

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HARRINGTON & SMITH, LLP  
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SHELTON, CT 06484-6212

EXAMINER
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HARVEY, JAMES R

ART UNIT	PAPER NUMBER
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2833

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/523,595

Applicant(s)

SOH, TECK

Examiner

James R. Harvey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10-16-06 (election).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29,32 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) 30,31,33 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29,32 and 35-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2-4-05</u> . | 6) <input type="checkbox"/> Other: _____  |

### ***DETAILED ACTION***

#### ***Election/Restrictions***

- Applicant's election with traverse of claims 1-29, 32 and 35-37 (Species 1 ( figures 1-6 ) ) in Paper dated 10-16-06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
- Claim(s) 30,31,33 and 34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a non-elected Species, there being no allowable generic or linking claim.
- The requirement is still deemed proper and is therefore made FINAL

#### ***Drawings***

- The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

In reference to Claim(s) 6,10,12,13,20,24,26, and 27, Applicant's recitation to a "lip" is not shown by a distinct numeral so that the public is aware of what structure would or would not infringe. For purposes of examination, it is assumed that the language is intended to be met by any surface that can be placed adjacent to another surface. A examination on the merits (as best understood) is addressed herein.

In reference to Claim(s) 29,32,35, the recitation " a section" is not shown by a distinct numeral so that the public is aware of what structure would or would not infringe. For purposes of examination, it is assumed that the language is intended to be met by any surface that

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can be placed adjacent to another surface. A examination on the merits (as best understood) is addressed herein.

In reference to Claim(s) 36 and 37, the recitation “housing located region” is not shown by a distinct numeral so that the public is aware of what structure would or would not infringe. A examination on the merits (as best understood) is addressed herein.

- The above feature(s) must be shown or the feature canceled from the claim. No new matter should be entered.

### ***Claim Objections***

- The following claim(s) is/are objected to because of the noted informalities:
- The following claim(s) is(are) objected to under 37 C.F.R. Rule 1.75 (d)(1). The terms and the phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

In reference to Claim(s) 3, 17 and those that depend thereon, the recitation “umbrella like expansion snap fit latching means” is vague and indefinite. For purposes of examination, it is assumed that the language is intended to be any structure that has the ability to move inward or outward. A examination on the merits (as best understood) is addressed herein.

In reference to Claim(s) 6,10,12,13,20,24,26, and 27, Applicant's recitation to a “lip” is not shown. For purposes of examination, it is assumed that the language is intended to be met by any surface that can be placed adjacent to another surface. A examination on the merits (as best understood) is addressed herein

In reference to Claim(s) 29,32,35, the recitation “ a section” is not shown by a distinct numeral so that the public is aware of what structure would or would not infringe. For purposes of examination, it is assumed that the language is intended to be met by any surface that can be placed adjacent to another surface. A examination on the merits (as best understood) is addressed herein.

In reference to Claim(s) 36 and 37, the recitation “housing located region of the latching means extending in a *longitudinal direction*” is not shown by a distinct numeral so that the public is aware of what structure would or would not infringe. A examination on the merits (as best understood) is addressed herein.

-- Appropriate response to the above is required.

***Claim Rejections - 35 USC § 102***

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter

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sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### ***Claim Examination***

\*\* The following claim(s) is/are rejected under 35 U.S.C. 102(b) as being anticipated by Uchida; herein referred to as uu; 5975914 ).

In reference to Claim(s) 1 and 15.; uu shows (cover sheet) a housing 10 carrying a plurality of conductive elements 52, each conductive element including a first contact region 58 ( figure 15 ) engaged with a conductive pad of the surface of the first electrical device (top circuit board ) and a second contact region engaged with a conductive pad of the surface of the second electrical device (bottom circuit board ), the conductive elements 52 carried by the housing to present at least the first contact region in a compressive engagement with the surface of the first electrical device, the housing presenting a latching means 32 engaged with the first electrical device to retain the first electrical device with the housing at least in a direction which extends parallel to the direction of compressive engagement to thereby hold the plurality of conductive pads of the first electrical device in physical contact with respective the first contact regions of the conductive elements.

In particular reference to the recitations of claim 1 of “to electrically connect each pad”, “for engagement with a conductive pad” and “to engage with said first electrical device” are seen to be for the intended use of the claimed structure and is given little patentable weight, since it has been held a recitation with respect to the manner in which a claimed apparatus is intended be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). Further, the recitation

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is not seen to claim any structure that prevents the reference from being used for the same intended use recitation of the claim.

In reference to Claim(s) 2 and 16, uu shows the latching means is a snap fit latching means. The meaning of "snap fit" is not set forth in the claims by any structure and is thus deemed to be so broad that it is met by the applied reference.

In reference to Claim(s) 3 and 17, uu shows (cover sheet) the latching means is an umbrella like expansion snap fit latching means. The meaning of "umbrella like" is not set forth in the claims by any structure and is thus deemed to be so broad that it is met by the applied reference.

In reference to Claim(s) 4,5,18 and 19, uu shows (cover sheet) the latching means includes at least one pair of latching regions ( near the lead line of numeral 32 ) provided by at least one leg ( above the lead line of numeral 32 ) projecting from the housing, at least one latching region (opposite to the inner region of the leg ) including an edge or surface (opposite to the inner surface ) the normal to which extends in a direction parallel to the direction of compressive engagement, the edge or surface engagable to a complementary edge or surface of the first electrical device the normal to which extends in a direction opposite to the first mentioned normal to thereby retain the first electrical device with the housing wherein each latching region is deflectable towards each other in a resilient manner and along a path which extends in a direction lateral to the direction of compressive engagement and thereby allows a snap-fit engagement with the first electrical device to occur. The recitation "engagable to" is seen to be for the intended use of the claimed structure and is given little patentable weight, since it has been held a recitation with respect to the manner in which a claimed apparatus is intended be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). Further, the recitation is not seen to claim any structure that prevents the reference from being used for the same intended use recitation of the claim.

In reference to Claim(s) 6 and 20, uu shows (cover sheet) the latching regions are provided in the form of a lip of the at least one leg. The meaning of the claimed structure of the recitation is not set forth in the claims by any clearly defined structure and is thus deemed to be so broad that it is met by the applied reference that is seen to show the same profile as applicant's figures.

In reference to Claim(s) 7 and 21, uu shows (cover sheet) latching regions is provided by a respective the leg. The meaning of the claimed structure of the recitation is not set forth in the claims by any clearly defined structure and is thus deemed to be so broad that it is met by the applied reference that is seen to show the same profile as applicant's figures.

In reference to Claim(s) 8 and 22, uu shows (cover sheet) at least one pair of legs are provided each leg including one latching region.

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In reference to Claim(s) 9 and 23, uu shows (cover sheet) each leg of the pair is resiliently biased towards a condition wherein the pair of legs are mutually cooperative to encourage the edge or surface of each latching region to remain in contact with a respective complementary edge or surface of the first electrical device.

In reference to Claim(s) 10 and 24, uu shows (cover sheet) the lip is defined by the profile of the leg.

In reference to Claim(s) 11 and 15, uu teaches the first electrical device with which the electrical connector is to engage, is a printed circuit board (abstract, last line). .

In reference to Claim(s) 12 and 26, uu shows the latching means extends from the housing to pass through an opening in the printed circuit board ( column 3, line 22 ) and wherein the latching means presents a lip to engage with the major surface of the printed circuit board opposite to the first mentioned surface.

In reference to Claim(s) 13 and 27, uu shows (cover sheet) the lip is positioned relative to the housing so that when the printed circuit board is held to the housing by the latching means the printed circuit board is pressed against the first contact regions with a force which is within the specifications for desired characteristic of physical contact.

In reference to Claim(s) 14 and 28, uu shows (cover sheet) the housing is of a generally elongate body which includes an upper surface and an opposite facing lower surface both substantially parallel to the elongate direction of the body and wherein the latching means extends from the housing at the upper surface. The meaning of "upper surface" is not set forth in the claims by any structure and is thus deemed to be so broad that it is met by the applied reference.

In reference to Claim(s) 29 and 32, uu shows (cover sheet) the latching means 32 comprises of a leg upstanding from the housing in a direction parallel to the direction of the compressive engagement and having a section there along which is of an increased width in a direction lateral to the compressive engagement direction which is to engage with an aperture of the first electrical device in an interference fit engagement manner.

In reference to Claim(s) 30 and 31, they have been withdrawn.

In reference to Claim(s) 33 and 34, they have been withdrawn.

In reference to Claim(s) 35, as best understood, uu shows the section is at a distance along the leg such that it securely engages the first electrical device and simultaneously holds the surface thereof in compressive engagement with the first contact regions of the conductive elements.

**\*\* The following claim(s) is/are rejected under 35 U.S.C. 103(a) as being unpatentable over uu in view of Peterson; herein referred to as pp (5257948 ).**

In reference to Claim(s) 36, uu shows substantially the invention as claimed. Uu shows the material of the latch was chosen to be a type of plastic material.



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However uu does not show the material of the latching means is of a sheet metal material and includes a housing located region which is engaged to the housing within a cavity thereof.

It is known in the art to choose different material based upon there known attributes. Pp is an example in the art that shows metal has been chosen as the material to make the latch. Pp shows (cover sheet) the material of the latching means is of a sheet metal material and includes a housing located region which is engaged to the housing within a cavity thereof.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the material to be metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416 (CCPA 1960).

One skilled in the art would have been motivated to choose such a material to make the arrangement of uu marketable to consumers that desire the advantages, reliability or performance associated with the particular metal material.

**\*\* The following claim(s) is/are rejected under 35 U.S.C. 103(a) as being unpatentable over uu in view of Peterson; herein referred to as pp (5257948 ) and further in view of Hooley et al. (herein referred to as hh (5966267 ).**

In reference to Claim(s) 37, uu as modified by pp above, shows (cover sheet) the housing holds two arrays of conductive elements (cover sheet of uu ) .

However, uu does not show each array extending in a longitudinal direction and disposed along respective top and bottom sides of the housing, the cavity of the housing retaining the housing located region of latching means extending in a longitudinal direction and intermediate of the two arrays.

It is known in the art to arrange structural parts such as latching means intermediate of two arrays. Hh is an example within the art that shows (cover sheet) the arrangement of a latching means 81 intermediate of the two arrays of contacts.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the teachings of uu, pp and hh to arrive at the same arrangement that applicant has claimed, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

One skilled in the art would have been motivated to look to the teachings of hh in order to reduce the number of latches that was taught by uu and pp and thus reduce the overall manufacturing time, cost or weight of the arrangement of uu.

### ***Conclusion***

- The prior art listed on PTO form 892 that is made of record and not relied upon is considered pertinent to applicant's disclosure because it shows the state of the art with respect to applicant's claimed invention.
- Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Harvey whose telephone number is 571-272-2007. The examiner can normally be reached from 8:00 A.M. to 5:00 P.M.

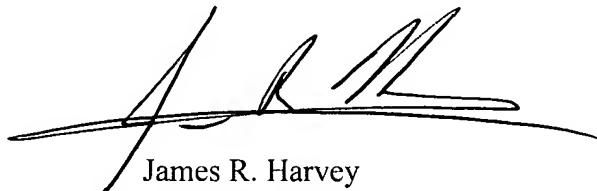
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800 extension 33.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.

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- Applicant is encouraged to send correspondence through the USPTO fax number 571-273-8300.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jrh  
January 5, 2007



James R. Harvey  
Primary Examiner